An Assessment of the Economics of Land Degradation for Improved Land Management in Central Asia

17th ICARDA-CAC Regional Program Planning Meeting

15 September 2016
Moscow, Russia

THE ECONOMICS OF LAND DEGRADATION

A GLOBAL INITIATIVE FOR SUSTAINABLE LAND MANAGEMENT

The Global Initiative "The Economics of Land Degradation" (ELD)

Initiated in 2010 by:

- the United Nations Convention to Combat Desertification,
- the Government of Germany,
- the Korean Forest Service, and
- the European Commission.

Purpose: to provide economically sound approaches to facilitate solutions for the progressing problem of land degradation.

The “ELD in Central Asia” Initiative

•Officially launched at the regional meeting of the UNCCD meeting, hosted by the Government of Turkmenistan in Ashgabat on August 2-3, 2014.

•At the bi-annual ministerial meeting of the Intergovernmental Commission on Sustainable Development in Central Asia in Dushanbe in November 28, 2014, the ELD Central Asia Initiative received the highest political support and considerations.

•ELD in Central Asia is performing economic research on specific topics in each of the partner countries and then to interpolate the resulting data into a regional report.

Goals of the initiative in Central Asia

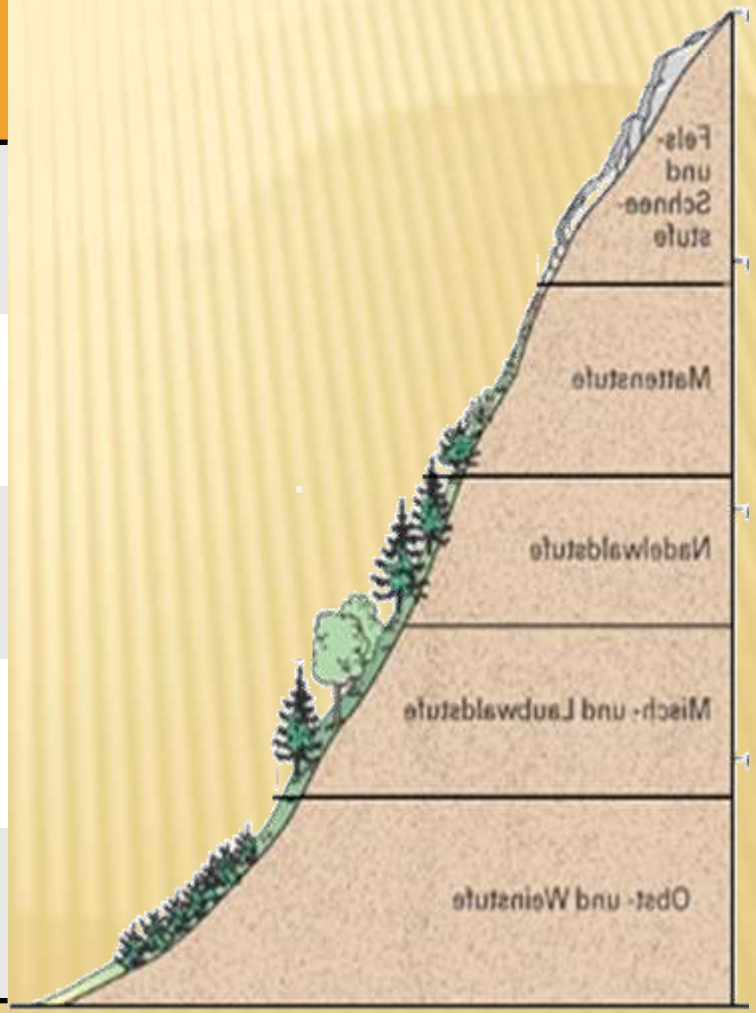
-Provide **economic valuation of losses (damages) from land degradation** and their major ecosystem services, caused by human's activities

-Validate of **economic effectiveness** and provide options for practices/methods of sustainable use of land resources, based on applicability and feasibility

-Increase **the awareness** of decision makers and **the capacity of local specialists** on the use of the analysis and economic valuation of ecosystem during decision-making process

ELD IN CENTRAL ASIA – AN ALTITUDINAL APPROACH

Country	Ecosystem
Kyrgyzstan –	highland pastures
Tajikistan	foothills and low mountains
Kazakhstan	forestry and rainfed agriculture
Turkmenistan	lowland pastures
Uzbekistan	Irrigated agriculture



The “ELD in Central Asia” Initiative

The research in each country included:

•identification of the current status of the ecosystem services,

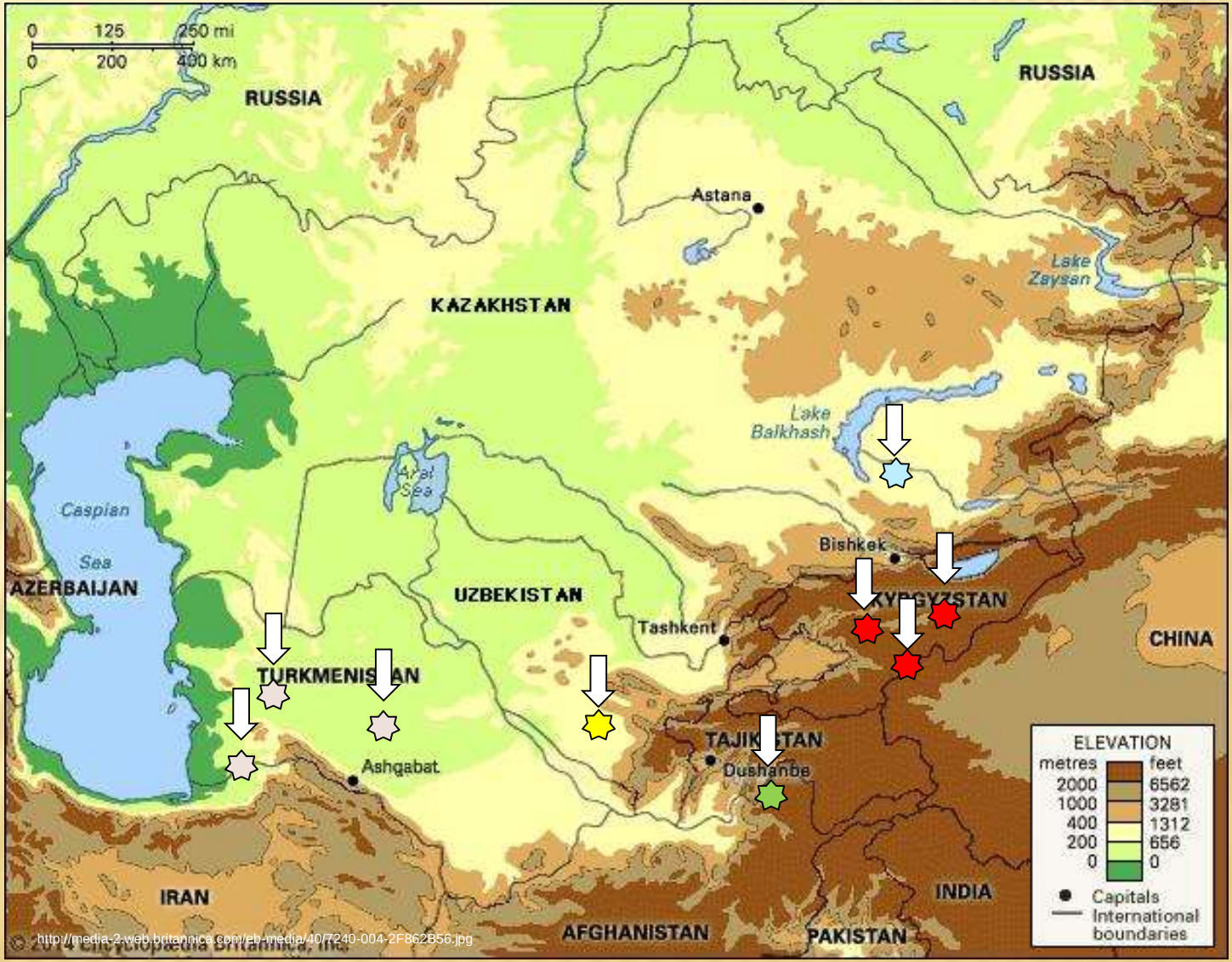
•cost benefit analysis of land degradation, and

•potential options for improvement of the situation towards the sustainable use of lands.

The initiative is being implemented by the Regional office of ICARDA in Tashkent and CGIAR Program Facilitation Unit for Central Asia and Caucasus with close coordination and support from the **UNCCD** and **ELD Secretariat** and the regional **GIZ FLERMONECA project**

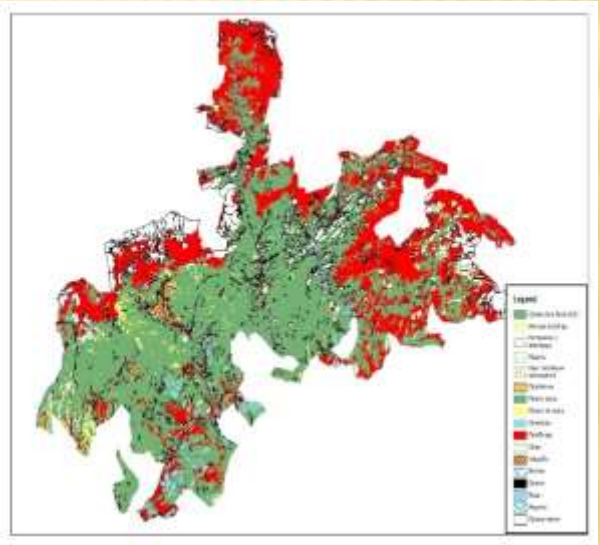
PILOT SITES OF ELD IN CENTRAL ASIA

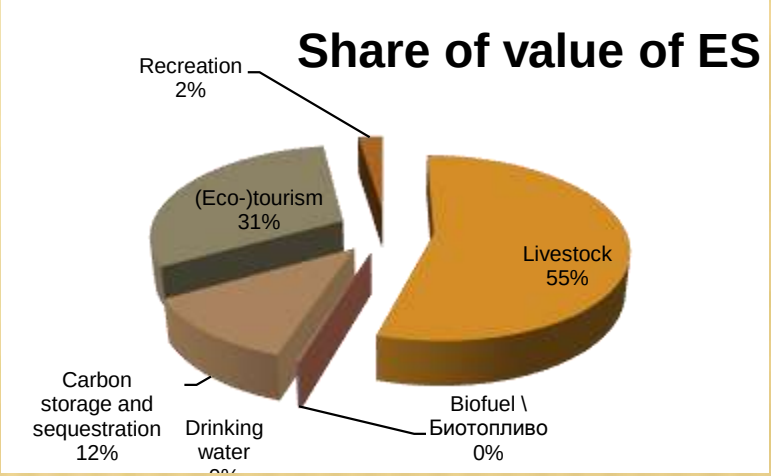
- Определить основные причины и ущерб от деградации земель
- Посчитать затраты от деградации земли и экосистемных услуг
- Подготовить обоснования для альтернативных вариантов устойчивого управления земельными ресурсами



Uniqueness of the country studies

- Integrated approach: consideration of all livelihood types under certain ecosystem;
- Ecological parameters are integrated in the economic assessment: for example, climatic parameters, emergency circumstances;
- Complete calculation of concrete alternative scenarios based on market data.

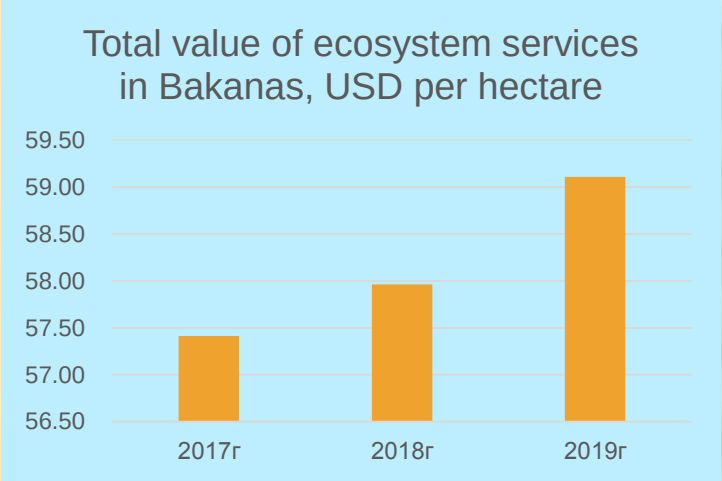




Preliminary results in Kazakhstan

Bakanak forestry

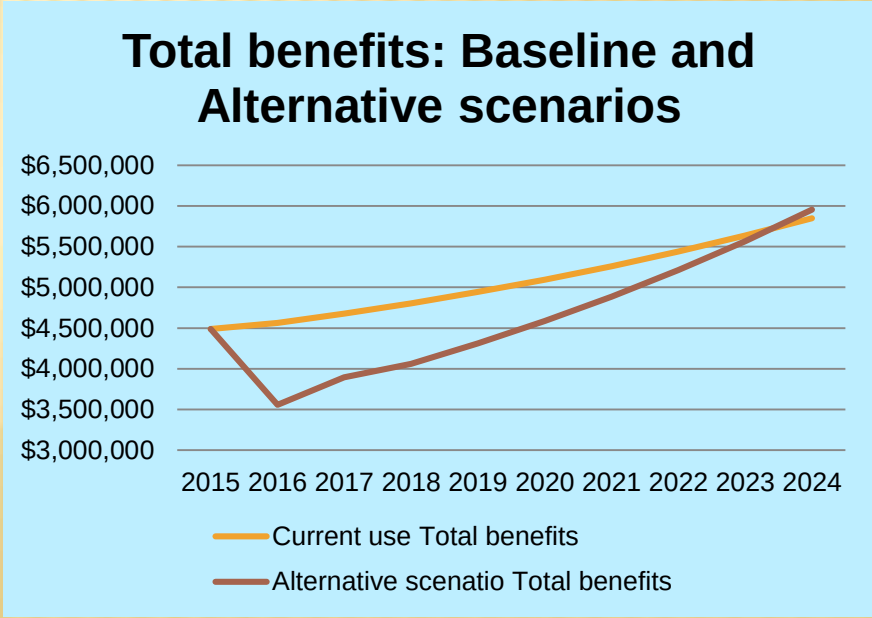
=> the potential for increased utilization of ecosystem services in desert forests is identified.



Preliminary results in Kyrgyzstan

Three pilot sites: Chon Aksuu, Kyzyl Unkur, Son Kul

=> The team worked on introduction of sustainable rangeland utilization, mitigation of grazing pressure and rehabilitation of pasturelands



Preliminary results in Tajikistan

Fayzabad district

- Suggested interventions included *application of no-till in irrigated agriculture, improved land use (intensive gardens), and rangeland improvement (+protection against natural disasters.*

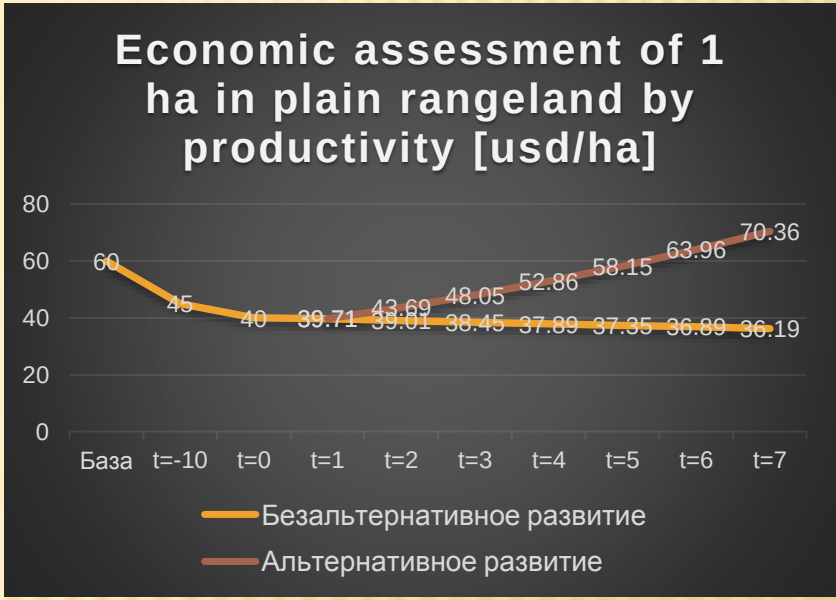
- According to preliminary estimates, introduction of the alternative scenarios in 10 districts would lead to a benefit of more than **22,319 mln. USD.**

Preliminary results in Turkmenistan

Three sites (three types of rangelands)

Consultants recommend rehabilitation and sustainable rangeland utilization through:

- development of year-round rangeland plant compositions (estimated productivity gain from 40 to 70 USD per ha);
- introduction of perennial and annual grasses;
- pasture rotation.



Investments are repaid in 4 years and generate 27% of profit

Preliminary results in Uzbekistan

Buka district

The team suggested introduction of advanced crop production methods as follows:

- Leave mulch on fields;
- Introduce crop rotation
- Plant forest belts around fields

	2105	NPV, 2024
Income from 2 ha of planted poplar	-900000	8335862
Income from yield increase by 15%, 54 ha	22941630	116487635
The income from cotton cultivation, 56 ha	17596600	89347894
Useful income		124823497
The benefit to the farmer, %		39,7

Investments in the latter lead to up to 40% increase in profit

Planned dates

- Completion of national and regional reports – September 2016
- Regional workshop to present the results – September 2016

Challenges

- Local capacity building – at regional and national level
- Development of norms, assessment methods and coefficients for ecosystems in Central Asia

Future opportunities

- Dissemination of project outputs/findings
- Integration in decision making process
- Raising awareness, ensuring access to information at all levels
- **Development and agreement on** norms, assessment methods and coefficients for ecosystems in CA
- Application of the approach in management of different ecosystems (e.g. water basins)

Thank you for attention!